NOAA Climate Goal Quarterly

Spotlight: NOAA's Climate Working Group Summer Meeting

From June 23 – 26, the NOAA Science Advisory Board's (SAB) Climate Working Group (CWG) held an external review of the draft *Strategic Plan for a National Climate Service* developed by the NOAA Climate Services Development Team. The purpose of the meeting was to assemble a representative group of experts and stakeholders from a broad range of sectors and disciplines to examine a long-range view of what a climate service should be and provide a productive and critical assessment of the draft strategic plan. This plan describes two separate efforts. The first aims to integrate and enhance NOAA's internal climate-related capabilities for a climate service. The plan also emphasizes the need to promote the development of external partnerships that will bring together the full capacity of the nation's climate enterprise to provide climate services.

The meeting brought together over 90 external participants from other federal agencies, non-governmental organizations, state agencies, universities, and the private sector. Overall, participants recognized the need for a national climate service and commended NOAA for taking the initiative to begin the discussion on the role and organization of such a service. At the same time, they indicated the scope of a truly successful climate service exceeds that outlined in the draft strategic plan. A formal review team composed of members of the CWG, external participants, and chaired by Eric Barron, Director of the National Center for Atmospheric Research (NCAR), was charged with developing a written critique and recommendations for moving forward and the CSDT and the CWG are now working on meeting these recommendations. The complete report, approved in July, is available on the NOAA SAB website: http://www.sab.noaa.gov/Reports/Reports.html.

GFDL Model Projects Fewer, More Intense Atlantic Hurricanes Late This Century - A new model of Atlantic hurricane activity for the last two decades of the 21st century projects a slight increase in hurricane intensity, but fewer hurricanes. On average, hurricanes are projected to have more intense rainfall. The study by scientists Tom Knutson, Joseph Sirutis, Stephen Garner, Gabriel Vecchi, and Isaac Held at NOAA's Geophysical Fluid Dynamics Laboratory (GFDL) was published online on May 18 in *Nature Geoscience* and in the June 2008 issue of the journal. The new model suggests that in the Atlantic basin, climate change from increasing greenhouse gases may cause some decrease in the number of tropical storm and hurricanes through the end of the 21st century. Simulations reveal higher levels of wind shear and other changes that would act to reduce the overall number of hurricanes. The study is titled "Simulated reduction in Atlantic hurricane frequency under twenty-first century warming conditions." *Pictured above: Sample of outgoing long wave radiation [W m^{-2}] from the model. (Source: Tom Knutson)*

Acidified Water Found on the Continental Shelf from Western Canada to Mexico - Scientists Richard Feely and Christopher Sabine at the Pacific Marine Environmental Laboratory and their research partners found corrosive acidified water, caused by carbon dioxide absorption by the ocean, during a field study from Canada to Mexico in May and June of 2007. The findings were published June 13, 2008, in the journal, *Science*. Samples were collected on the continental shelf, <20 miles off the west coast of North America. Seasonal upwelling brought acidified water to mid-shelf depths of ~40 to 120 meters in most regions, and all the way to the surface in northern California. These corrosive acidified waters could have adverse effects on marine fish and shellfish. *(Source: NOAANews)*

NOAA Holds Workshops on Climate Impacts on Coastal and Living Marine Resources - The Climate Program Office (CPO) hosted two workshops to bring together NOAA scientists and managers working on climate impacts on living marine resources (LMR) and on climate impacts on coastal communities and ecosystems, respectively. Attendees included headquarters and field staff from every line office. The focus of the two workshops was how to better integrate climate research, awareness, and information into NOAA's stewardship activities. Participants also discussed climate-sensitive coastal and marine management challenges, current resources, and how to address

gaps in information, tools, and delivery methods. A report summarizing the workshops and participant recommendations is in development. Materials from the LMR workshop are posted at: www.st.nmfs.noaa.gov/st7/ may2008.html. Materials from the coastal workshop are posted at: https://inside.nos.noaa.gov /sanctuarynet/mgt/climateandcoasts.html. *(Source: Rebecca Feldman)*

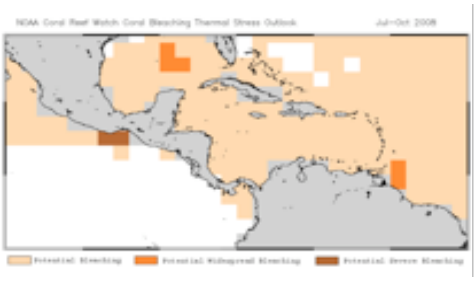
Planning begins for U.S. Climate Reference Network (USCRN) Stations in Alaska – The National Climactic Data Center (NCDC), along with the National Weather Service's Alaska Region Headquarters (ARH), held a workshop in Anchorage, AK, in May that focused on plans to expand the USCRN into Alaska. Four prototype USCRN sites were installed in Alaska in 2004-2005 via the U.S. Global Climate Observing System (GCOS) Program to provide experience with CRN technology in this unique environment. The intent, based on available resources, is to install and commission 29 additional USCRN sites in Alaska over the next several years. NCDC and ARH have established partnerships with federal agencies in the state (e.g., USGS and USDA), Environment Canada (with which NCDC has a bilateral climate observing agreement), and the University of Alaska, Fairbanks, to plan for potential USCRN sites in Alaska. The first new site is slated for installation in the Fall 2008 timeframe at the USGS Shumagin Geomagnetic Observatory site in Sand Point, AK. Presentations from the workshop can be found on-line at ftp://dossier.ogp.noaa.gov/USCRN-in-Alaska-Workshop-May2008. *Pictured above: Prototype USCRN site in Fairbanks, AK. (Source: Howard Diamond, NCDC)*

NOAA-Led Report on Weather and Climate Extremes Released – NOAA was the lead agency for the U.S. Climate Change Science Program (CCSP) Synthesis and Assessment Product 3.3, *Weather and Climate Extremes in a Changing Climate*, which was released on June 19. It represents the first comprehensive analysis of observed and projected changes in weather and climate extremes in North American and U.S. territories. Among the major findings are that, in the future, droughts (primarily in the Southwest), heavy downpours, excessive heat, and intense hurricanes are likely to become more commonplace due to increasing concentrations of heat-trapping gases in the atmosphere. Effects will vary regionally. Co-chaired by Thomas Karl of NCDC and Gerald Meehl of the NCAR, this assessment report involved many scientists from academia, federal, international, and other entities. Among them were Federal Advisory Committee Lead Authors Ken Kunkel and William Gutowski. The authors received editorial and graphics support from Susan Hassol, Sara Veasey, and others. To view the report please visit: http://www.climatescience.gov/Library/sap/sap3-3/final-report. *(Sources: Rebecca Feldman, NOAANews)*

Upcoming Career Workshop on Building Leadership Skills

The Earth Science Women's Network is holding a Career Workshop on Building Leadership Skills for Success in Scientific Organizations on December 13-14, 2008, in San Francisco, CA. If interested in attending, please apply by September 15 and see the workshop homepage for other application requirements: www.joss.ucar. edu/joss_psg /meetings/Meetings_2008eswn_workshop.

New Seasonal Coral Bleaching Forecasts Developed With Climate Program Office (CPO) Funding Now Available - A project funded by the CPO Sectoral Applications Research Program (SARP) in 2006 generated a new decision support product for coral reef managers—seasonal bleaching forecasts. The system was developed by NOAA scientists at Earth System Research Laboratory (ESRL) and the Coral Reef Watch program. The system uses NOAA experimental sea surface temperature forecasts (for up to three months) to map anticipated coral bleaching severity. Coral bleaching is caused by various stressess, especially increased ocean temperatures. This season's forecast predicts a widespread risk of bleaching in the Northwest Hawaiian Islands and limited bleaching in the Caribbean. For more information, see: http://coralreefwatch.noaa.gov/satellite/bleachingoutlook. SARP funding for the forecasts helped investigators leverage additional funding from NOAA's Coral Program, leading to advances in coral management. *Pictured above: NOAA coral reef watch bleaching outlook for July-Oct 2008. (Source: Lisa Vaughan)*



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